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TA-53 Procedure

TA-53 Lockout/Tagout Implementation

53FMP-106-04.1

Effective date: 9/15/95

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1.0 Introduction

This document is organized in the same fashion as is LP-106-01. Information from LP 106-01 is not duplicated herein, except as needed for clarity. By consulting the similarly numbered paragraphs of this procedure, readers will be able to find the appropriate TA-53 guidance for LP 106-01. This document replaces the *MP-Division Lockout/Tagout Implementation Plan* of 12/92 .

2.0 Purpose

The purpose of LP 106-01 is to provide procedures for authorized employees to control the release of hazardous energy during the service, maintenance, or modification of machinery, equipment, or systems. The purpose of this procedure is the same, and it expands upon LP 106-01 by providing guidance on the application of LP106-01 at TA-53. The alternative to following any provision of this guidance is compliance with the corresponding provision of LP 106-01. Except for major headings, **mandatory provisions are printed in bold text.**

3.0 Scope

Procedures for protection of personnel not engaged in maintenance, servicing, or modification are contained in 53 FMP 106-03, *Protection of Co-located Personnel by Control of Equipment/System Status (Orange Lock Procedure)* or other applicable procedures such as LP 106-03 on tagout of unsafe equipment.

When diagnosis or troubleshooting is required, lockout/tagout does not apply if all persons involved in an operation are expecting the equipment or system to be energized and would not be harmed if it were.

In section 3.2 of LP106-01, "Exemptions," the exemption for cord- and plug-connected electrical equipment applies to all such equipment, whether or not it contains stored energy, provided that *all* of the following are true:

- there is only one plug, and
- an approved SOP or SWP is used to relieve hazardous amounts of stored energy, i.e., >10 Joules, and
- the person(s) working on the equipment has uninterrupted control of the plug.

4.0 Definitions

Multi-Point Lockout. Any situation where more than one energy source must be isolated in order to control the unexpected release of hazardous energy, or where lockout/tagout must be applied to multiple points of an equipment item or system to control its state. Multi-point lockouts using red locks always require a specific written lockout tagout procedure.

5.0 Responsibilities

Who?	Responsibility
Line manager	¥Appoint Authorized Employees for equipment and systems owned by his/her organization that contains or produces hazardous energy, and provide a list of Authorized Employees to affected TA-53 organizations.

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Lead Authorized Employee	¥Assist others who are not familiar with the equipment or system in the application of locks and/or tags. ¥Ensure that authorized employees involved in a group lockout/tagout are trained in the written procedure, and that continuity of protection is maintained.
Authorized Employee	¥If not knowledgeable about the equipment or system, obtain the assistance of a Lead Authorized Employee. ¥Notify Building Manager of lockout/tagouts on RP&IE (facility) equipment or system, except where otherwise specifically stated in a written procedure. ¥Notify group personnel responsible for PP&PE (programmatic) equipment or system of the application and/or removal of red locks/tags to that equipment or system. ¥Notify CCR of all lockout/tagouts on equipment necessary for the production and delivery of beam to scheduled LAMPF/LANSCE/WNR experiments
Building Manager	¥As necessary, notify Affected Employees of lockout/tagouts on RP&IE (facility) equipment.

6.0 Precautions and Limitations. This is not a complete procedure for lockout/tagout, but supplements LP 106-01. Authorized Employees must be familiar with and trained in LP 106-01.

7.0 Procedural Steps

7.1 Lockout/Tagout Criteria

The TA-53 Lockout/Tagout Record form (Attachment A to this procedure), which incorporates the provisions of this procedure, should be used for lockout/tagout activities at TA-53. A specific *written* procedure is not required if the eight conditions listed in LP 106-01 are met. Also note that:

- For condition #4, a written procedure *is* required if the equipment must be tagged out because there is no locking mechanism on the energy isolation device.
- The determination for condition #8 is made by the line manager or Authorized Employee responsible for the equipment or system to be locked or tagged. *If to the best of that person's knowledge*, no accident has occurred involving the unexpected activation or re-energization of the equipment or system, then a written procedure is not required.

7.2. Written Procedure

An independent review of the written procedure for lockout/tagout by a qualified person who will not normally perform the procedure is recommended. This review should be conducted before the procedure is approved for use and should include a walk-through.

7.3. Lockout/Tagout Procedure

1. Review. If you are not knowledgeable of the equipment or system, contact the group responsible for it and request that a Lead Authorized Employee assist you with the lockout/tagout and provide training in the written procedure. It is at this point in the process that the Lockout/Tagout Record should be filled out.

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2. **Notify.** When the 800 MeV accelerator is in operation (defined as those times that the Central Control Room is staffed 24 hours per day), the Shift Supervisor in CCR must be notified of all lockout/tagouts on equipment necessary for the production and delivery of beam to scheduled experiments. No other notification is necessary unless specifically called for in a written procedure. The notification to CCR applies whether or not a written procedure is used.

During times that the accelerator is not in operation, and *at all times* for equipment not necessary for the delivery of beam to scheduled experiments, notification should be given according to the written procedure, if one is required. **If a written procedure is not required, notify the Building Manager for RP&IE (facility) equipment, or the group person(s) responsible for PP&PE (programmable) equipment.**

If the lockout/tagout is performed during other than normal working hours when appropriate personnel are not available, notification should be provided by voice mail, e-mail, note, or other available means and followed up at the beginning of the next shift when the person is available.

- 3.-4. **Shut down. - Isolate.** No additional guidance to LP 106-01 is needed.
5. **Lockout and tagout.** The use of multiple lockout devices on energy-isolating devices or lock boxes/keyrings is strongly recommended. It should be possible at all times for employees joining the effort to apply their lock(s) without removing the lock(s) of others.

For multi-point lockouts, two options are recommended:

- Each Authorized Employee may attach his/her locks and tags to a multiple lockout device on each energy-isolation device, or
- a single red lock and tag may be attached to each energy isolating device, all the keys being collected and placed in a lock box or on a lockable key ring, with each Authorized Employee placing his/her red lock and tag on a multiple lockout device on the box or ring.

6. **Independent verification.**

The application of independent verification to lockout/tagouts may be based on a graded implementation of DOE 5480.19, *Conduct of Operations Requirements for DOE Facilities*, as determined by line management. If independent verification is not required, enter "N/A" in Step 6 of the "Los Alamos National Laboratory Written Procedure for Lockout/Tagout." If a written procedure is not required, independent verification is not required.

On the "TA-53 Lockout/Tagout Record" form, check the box indicating that independent verification has been completed, or that it is not required.

- 7-8. **Relieving or restraining stored hazardous energy.- Verification.**

In the case of a group lockout/tagout, each Authorized Employee should be convinced that his/her safety has been ensured by the actions taken by the Lead Authorized Employee.

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9. Perform. No additional guidance to LP 106-01 is needed.

7.4. Delays in Maintenance, Service, or Repair. No additional guidance to LP 106-01 is needed.

7.5. Return to Service Procedure

1.-3. Equipment Check--Work area check--Verification. No additional guidance to LP 106-01 is needed.

4. Notify. The same notification provisions used for the lockout/tagout apply to the return to service.

5. Remove locks and tags and re-energize.

If not fully knowledgeable of the equipment or system, Authorized Employees involved in a group lockout/tagout should not re-energize the equipment or system, but should notify the Lead Authorized Employee that the equipment or system may be re-energized.

6. Return to Service. No additional guidance to LP 106-01 is needed.

7.6. Temporary Removal of Locks/Tags. Only one notification per 7.3 or 7.5 of this procedure need be provided for the process of temporarily removing locks/tags for testing or positioning.

7.7. Group Lockout/Tagout

LP 106-01 makes an exception to the written procedure requirement for pairs of workers from the same craft (buddy system); this exception applies at TA-53 to employees from the same team or section with similar levels of expertise.

Line management or supervision should assign a Lead Authorized Employee for any job in which persons not fully knowledgeable of the equipment or systems must apply locks and/or tags. A Lead Authorized employee has the responsibility to ensure continuity of personnel protection. All Authorized Employees on the job must be familiar with the written procedure.

7.8. Shift or Personnel Changes

Shift or personnel changes for lockout/tagouts that would not otherwise require a specific written procedure may be handled in the following way. In this case, the following steps will suffice for a written procedure unless one is required for another reason.

1. An Authorized Employee who departs a job without replacement and *without expectation of returning* to the job before it is completed removes his/her lock and tag from the multiple lockout device and initials the Record form.
2. If a departed Authorized Employee does return to the job, s/he reviews the Record form, appends another signature and date, and reapplies his/her lock and tag in the same location.
3. When one or more Authorized Employees are being replaced by other Authorized Employees, the incoming and outgoing employees go together to the energy isolation device. The incoming employee(s) places his/her lock

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and tag on the multiple lockout device and *then* the outgoing employee(s) removes his/her lock and tag. The outgoing employee(s) initials the record form and the incoming employee(s) signs the record form. Incoming Authorized Employees must ensure that they are familiar with the means used to lock and tag out the equipment and are satisfied the with level of protection provided.

4. If a new Authorized Employee joins a job in progress s/he will review and sign the Record form and, if satisfied with the level of protection, will place his/her lock and tag on the multiple lockout device at the location indicated on the form, and receive a briefing on the equipment status from the personnel already on the job.

7.9. through 7.13. No additional guidance to LP 106-01 is needed.

8.0. Required Records

8.1. Filling Out the Lockout/Tagout Record. The equipment identification/ description section of the Record should also contain the location of the energy isolation device(s) including, for electrical disconnects, the panel and circuit numbers if not listed in the written procedure.

9.0. References

9.1. 29 CFR 1910.147, *The control of hazardous energy (lockout/tagout)*

9.2. LP 106-01, *Lockout/Tagout for Control of Hazardous Energy Sources for Personnel Safety (Red Lock Procedure)*

9.2. LP 106-02, *Lockout/Tagout for Control of Equipment and Systems Status (Blue Lock Procedure)*

9.3. 53 FMP 106-03, *Protection of Co-Located Personnel by Control Of Equipment/System Status (Orange Lock Procedure)*

9.4 DOE 5480.19, *Conduct of Operations Requirements for DOE Facilities*

10.0. Attachments: Attachment A, TA-53 Lockout/Tagout Record Form